

CLAIMS:

1. A digital television signal translator comprising:

a tuner tuned to receive an RF digital television signal on a first selected television channel;

a demodulator arranged to provide a baseband television signal from the RF digital television signal to which the tuner is tuned, wherein the baseband television signal includes a data component identifying the first selected channel;

a data replacer arranged to replace the data component identifying the first selected channel with a data component identifying a second selected channel different from the first selected channel; and,

a modulator arranged to modulate the baseband television signal including the data component identifying the second selected channel for transmission as a digital television signal on the second selected channel.

2. The digital television signal translator of claim 1 wherein the data replacer is also arranged to re-compute a cyclic redundancy code based upon the data component identifying the second selected channel and to replace a cyclic redundancy code data component in the baseband television signal with the re-computed cyclic redundancy code.

3. The digital television signal translator of claim 1 wherein the data replacer is also arranged to replace a virtual channel data component in the baseband television signal with a replacement virtual channel data component.

4. The digital television signal translator of claim 3 wherein the data replacer is further arranged to re-compute a cyclic redundancy code based upon the data component identifying the second selected channel and the replacement virtual channel data component and to replace a cyclic redundancy code data component in the baseband television signal with the re-computed cyclic redundancy code.

5. The digital television signal translator of claim 1 wherein the data replacer is also arranged to replace an NTSC channel data component in the baseband television signal with a replacement NTSC channel data component.

6. The digital television signal translator of claim 5 wherein the data replacer is further arranged to re-compute a cyclic redundancy code based upon the data component identifying the second selected channel and the replacement NTSC channel data component and to replace a cyclic redundancy code data component in the baseband television signal with the re-computed cyclic redundancy code.

7. The digital television signal translator of claim 5 wherein the data replacer is further arranged to replace a virtual channel data component in the baseband television signal with a replacement virtual channel data component.

8. The digital television signal translator of claim 7 wherein the data replacer is still further

arranged to re-compute a cyclic redundancy code based upon the data component identifying the second selected channel, the replacement virtual channel data component, and the replacement NTSC channel data component, and to replace a cyclic redundancy code data component in the baseband television signal with the re-computed cyclic redundancy code.

9. A method of replacing a data component identifying a first selected channel with a data component identifying a second selected channel, wherein the data component identifying the first selected channel is contained in a PSIP data table received in a digital television signal, wherein the first selected channel is different from the second selected channel, and wherein the method comprises:

finding the data component identifying the first selected channel in the PSIP data table received in the digital television signal; and,

replacing the data component identifying the first selected channel with the data component identifying the second selected channel.

10. The method of claim 9 wherein the finding of the data component and the replacement of the data component identifying the first selected channel with the data component identifying the second selected channel are performed at baseband.

11. The method of claim 9 further comprising:

re-computing a cyclic redundancy code based upon the data component identifying the second selected channel; and,

replacing a cyclic redundancy code data component in a PSIP packet with the re-computed cyclic redundancy code.

12. The method of claim 9 further comprising replacing a virtual channel data component in the PSIP data table with a replacement virtual channel data component.

13. The method of claim 12 further comprising:

re-computing a cyclic redundancy code based upon the data component identifying the second selected channel and the replacement virtual channel data component; and,

replacing a cyclic redundancy code data component in a PSIP packet with the re-computed cyclic redundancy code.

14. The method of claim 9 further comprising replacing an NTSC channel data component in the PSIP data table with a replacement NTSC channel data component.

15. The method of claim 14 further comprising:

re-computing a cyclic redundancy code based upon the data component identifying the second selected channel and the replacement NTSC channel data component; and,

replacing a cyclic redundancy code data component in a PSIP packet with the re-computed cyclic redundancy code.

Attorney Docket  
7190

16. The method of claim 14 further comprising replacing a virtual channel data component in the PSIP data table with a replacement virtual channel data component.

17. The method of claim 16 further comprising:

re-computing a cyclic redundancy code based upon the data component identifying the second selected channel, the replacement virtual channel data component, and the replacement NTSC channel data component; and,

replacing a cyclic redundancy code data component in a PSIP packet with the re-computed cyclic redundancy code.